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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,812	07/19/2004	Werner Helms	016909-0320	4934
22428	7590	02/07/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			HARMON, CHRISTOPHER R	
			ART UNIT	PAPER NUMBER
			3721	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,812

Applicant(s)

HELMS ET AL.

Examiner

Christopher R. Harmon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the elements of the heat exchanger (ie. heat exchange fins) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

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2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation describing the embossment "which is directed toward the inside of the tube" (claim 10, line 8) is confusing and indefinite. Furthermore the phrase "deformable in response to tolerance variations of the at least one web" is indefinite and unclear. Claim limitations should be positively recited in order to provide clarification.

Claim 16 recites the limitation "the longitudinal face" in line 3. There is insufficient antecedent basis for this limitation in the claim. Furthermore, it is uncertain how the first and second embossment are related to 'each' web.

Claim 20 recites the limitation "the tolerance" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 22, the term "corresponding" (line 4) is unclear as to how it describes the at least one embossment or relationship to another element. It is unclear how a single web (at least one) may be formed from a flat strip with an embossment (made in the strip) and then formed such that the web faces the embossment ie. it would seem that the embossment would be formed in the singular web. Furthermore, "the embossment" (lines 6, 8-9, last; claim 23, line 5) lack proper antecedent basis, it is assumed that the "at least one corresponding embossment" is being referenced.

Finally, the limitation "standardizing the flat tube to a reference dimension, as regards..." is unclear and indefinite.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-15, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean Louis (FR#2780153) in view of Applicant's Admitted Prior Art (AAPA).

Jean Louis show a multi-chamber tube which is manufactured from a flat strip with two longitudinal faces 12, 14, two curved narrow faces 16, 18, at least one web which is folded out and which divides adjacent chambers which is soldered to the inner wall 14 with an embossment 34. As best understood, Jean Louis does not show a longitudinal seam as claimed. However the previously made common knowledge modification, ie. provision of a longitudinal seam, (see Non-Final Rejection of 8/18/05) is taken to be admitted prior art because applicant failed to traverse the examiner's assertion of official notice.

Regarding claims 11-15, the manner of the embossment in the web is considered a plateau; see figures 1 and 3, the dimensions of which (embossment, web thickness, and tube breadth) are obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering

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the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 22, the invention to Jean Louis is formed of at least one web (flat); the distal ends 20, 22 moved into abutment with the embossment 34; see figure 3.

Regarding claims 23-24, figure 4 of Jean Louis depicts a heat exchanger assembly comprising heat exchange fins 40 and flat multi-chambered tubes of figure 1. It is uncertain whether or not the tubes and fins are braze-connected, however the examiner takes Official Notice that brazing is well known in the art as a form of connecting and would have been obvious to one of ordinary skill in the art to braze the elements together for the final assembly completion.

6. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean Louis (FR#2780153) in view of Letrange (US 5,704,423).

Jean Louis does not directly disclose a first and second web, however Letrange teaches a flat tube for a heat exchanger utilizing first 12 and second webs 14. It would have been obvious to one of ordinary skill in the art to include a first and second web as taught by Letrange in the invention to Jean Louis in order to create a flat multi-chambered tube with additional chambers.

Response to Arguments

7. Applicant's arguments filed 11/18/05 have been fully considered but they are not persuasive. The shape of the embossment of Jean Louis is considered a plateau not merely a triangular shape as applicant argues; see figure 3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is

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noted that the features upon which applicant relies (i.e., functionality of embossment, intended use) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

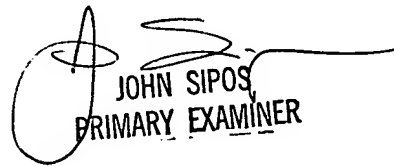
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Harmon whose telephone number is (571) 272-4461. The examiner can normally be reached on Monday-Friday from 9-6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ch


JOHN SIPOS
PRIMARY EXAMINER